

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of the)
RAMONA MUNICIPAL WATER DISTRICT for)
Review of Addendum No. 1 to Order)
No. 79-17 of the San Diego Regional)
Water Quality Control Board. Our)
File No. A-292.)

Order No. WQ 81-16

BY THE BOARD:

On December 18, 1971, the San Diego Regional Water Quality Control Board (Regional Board) adopted Order No. 71-64 prescribing waste discharge requirements for the Ramona Municipal Water District (District). The District operates wastewater treatment facilities within the San Diego Country Estates development in central San Diego County about two miles southeast of the community of Ramona. Several addenda were appended to Order No. 71-64 and on February 26, 1979, a new order, No. 79-17, was issued renewing the requirements contained in Order No. 71-64 together with three of its addenda.

On January 19, 1981, the District submitted a report of waste discharge which included a thoroughly developed argument for applying State Water Resources Control Board Order No. WQ 80-7 to its wastewater treatment facilities at San Diego Country Estates. Specifically, the District requested that the TDS limits be relaxed from 200 mg/l to 550 mg/l. The Regional Board considered the arguments and facts contained in the report and, on April 27, 1981, adopted Addendum No. 1 to Order No. 79-17. While

the Addendum contains relaxations to the TDS limitations, the District did not feel that the relaxations went far enough. The Addendum allows a TDS concentration not to exceed 200 mg/l or the concentration found in the potable water distributed to San Diego Country Estates, whichever is greater.

The District filed this petition on May 15, 1981, seeking review of the Addendum.

BACKGROUND

The wastewater treatment facilities are located in the Gower Hydrologic Subarea of the San Vicente Hydrologic Subunit of the San Diego Hydrologic Unit. Wastewater from the plant averages about 0.2 million gallons per day (mgd), representing the contribution from approximately 2,000 people in about 900 dwellings. The treated effluent is presently spread on 65 acres of land. Groundwaters downgradient of the disposal area are designated in the Basin Plan for existing and potential beneficial uses including municipal, domestic, and agricultural supply. There are a significant number of domestic and irrigation wells in the downgradient area. The disposal area is also located about five miles upstream of San Vicente Reservoir, a domestic water supply facility for the City of San Diego. Groundwater in the discharge area is of good quality, having total dissolved solids (TDS) concentrations of about 500 milligrams per litre (mg/l). This compares favorably with the Basin Plan objectives of 600 mg/l.

The District, in addition to operating the wastewater treatment facilities, is a water supplier. It uses three

water supplies for its service area. About 300 acre-feet of well water is drawn each year with an average TDS of 750 to 800 mg/l. Another 2,500 acre-feet of water comes from Sutherland Reservoir through an exchange agreement with the City of San Diego. The TDS of this water is excellent, nearly always less than 200 mg/l. The District's largest water supply source is the San Diego County Water Authority (CWA). Seventy percent of the District's current water usage, about 6,000 acre-feet per year, comes from this 550 mg/l TDS source. Because of physical and contractual limits on the well water and the Sutherland supply, future increases in water use will rely almost totally on additional CWA water.

Order No. 79-17, incorporating the terms of the older orders, called for a TDS concentration of 200 mg/l in the reclaimed water which is discharged to the land. The District met this limitation by providing secondary treatment to all wastewater and affording tertiary treatment to enough of the water so that the blend satisfies the effluent limitation. Because of seasonal variations in the use of the lower quality CWA water, treating the water to arrive at the 200 mg/l standard becomes rather burdensome for about a third of the year. During the high demand summer months, more CWA water is used and, when it is mixed with the Sutherland water, the average water quality drops markedly. Thus, while water treatment during the winter need only restore the water quality to the level of the source, summer treatment must actually improve it by a factor of two or more in order to meet the 200 mg/l standard. The tertiary treatment

consists of pre-chlorination, filtration, demineralization (by reverse osmosis), and post-chlorination. The process is, as the District points out, energy intensive and expensive.

The reclaimed water has been applied to the same 65-acre parcel since the plant began operating in 1974. A local rancher grazed his cattle on the land until 1977 when vandalism to the water irrigation facilities led the District to terminate that arrangement. In 1977, the Regional Board approved two water reclamation projects of the District, one to supply water to a golf course in the vicinity and another for use in soil compaction and dust control. Neither project has ever materialized. The 65-acre site has been subdivided into 10 residential lots and recent developments indicate that the land on which the water is discharged will be horse pasturage. The District has retained an easement to discharge to this land. However, no other water reclamation projects have been forthcoming.

In Order No. WQ 80-7, we considered what steps could be taken to encourage the use of reclaimed water as a substitute for relatively poor quality imported water. In that case, the Buena Sanitation District in San Diego County wished to use reclaimed wastewater to irrigate a golf course. Applying the "one-third rule",^{1/} the Regional Board set the TDS limit on that water at 400 mg/l. The petitioner argued that such a standard

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1. The "one-third rule" presumes that two-thirds of applied irrigation water evapotranspires before reaching the groundwater table, resulting in a three-fold increase in the mineral concentration which reaches the groundwater. We recognized that the rule has some validity but rejected its rigid application.

made no sense because replacement water from the CWA with a TDS content of 550 mg/l would be used on the golf course if the reclaimed water was subjected to such strict and expensive requirements. Recognizing our obligation to encourage water reclamation as well as to maintain high water quality, we held that "it would be unreasonable to set the limitation lower than the 550 mg/l quality imported water that would be used for irrigation in the absence of a reclamation project." Our ruling in Order No. WQ 80-7 can be taken to mean that, in areas where water is scarce, the quality of reclaimed water ought to be comparable to that of the water which would be used, were the reclaimed water not available.

CONTENTIONS AND FINDINGS

1. Contention: The District contends that it operates an ongoing, viable reclamation project and should be subject to the principles set out in Order No. WQ 80-7.

Finding: The District bases its claim to be a reclamation project on the use of its water on the 65-acre site near its facilities. All indications in the record point to a conclusion that this is not a true reclamation use. It appears that, but for the need to dispose of the water, there would be little or no irrigation of the primary disposal area. The Regional Board charitably decided to treat the District's project as reclamation. We cannot be so charitable.

A reclamation project must take the place of another water source, in whole or in substantial part, if it is to be subject to Order No. WQ 80-7.^{2/} While water conservation is extremely important in many areas of the state, we cannot sacrifice water quality where the savings are contrived. If the reclaimed water were no longer spread on the 65-acre site, there is no indication that imported water of lesser quality, or any substantial amount of water for that matter, would replace it. Based on the present method of wastewater disposal, we cannot conclude that the District is presently operating a reclamation project.

We are not unmindful of the various problems the District experienced in meeting the Regional Board's prior standard of 200 mg/l TDS, especially the greater energy costs involved. Because water conservation is so important in a region like the San Diego Basin, we wish to encourage bona fide reclamation projects. Therefore, instead of completely discarding the new water quality standards of Addendum No. 1, we would prefer to see the District begin to implement a more aggressive reclamation policy. Within six months of the date of the adoption of this order, the District shall report and the Regional Board will comment on the report to this Board concerning possible reclamation projects in the District's service area. Included in the report should be a list of all likely projects, the scope of such projects, the

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2. The Water Code defines "reclaimed water" to mean water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. (Water Code Section 13050(n).)

problems which may hinder such projects, and what the Regional Board and the District will do to overcome such problems. It shall further specify what, if any, assistance is needed from the State Board to encourage these projects.^{3/} Finally, the report shall include a timetable for implementing the new reclamation projects.

If the status report is satisfactory and the District maintains compliance with the timetable, we will continue to treat the District's facilities as qualifying as a reclamation project under Order No. WQ 80-7. Otherwise, we will withdraw such favored project status and require appropriate revisions to Order No. 79-17.

2. Contention: The District contends that the proper TDS standard for its reclaimed water should be that of the imported water, 550 mg/l.

Finding: Under our Order No. WQ 80-7, it is important to determine the precise quality of the water which will be used if reclaimed water is not available. In this case, the District contends that the replacement water is that which comes from CWA. Therefore, according to the District, the reclaimed water ought to meet a TDS standard of 550 mg/l.

The facts do not support the conclusion which the District would have us draw. San Diego Country Estates receives water from the three different sources discussed above but not

3. We have in mind the provisions of Water Code Sections 13550-13551 which, under certain circumstances, prohibit the use of potable water for irrigation when reclaimed water is available.

in the same proportion as does the rest of the District's service area. The record indicates that San Diego Country Estates receives almost nothing but Sutherland water for half of the year and a mixture of Sutherland and CWA water for the rest. Monitoring reports submitted to the Regional Board by the District for 1980 indicate that 47 percent of the water came from CWA and 53 percent from Sutherland. The average TDS for water delivered to San Diego Country Estates for that year was reported to be 427 mg/l. This figure seems consistent with other recent years.

We think the blend average is the appropriate standard to apply to the reclaimed water. Whether the District complies with this standard by meeting it twelve months a year or by allowing the figure to rise and fall with this resultant average is irrelevant from a water quality point of view. The Regional Board has opted for the latter but should permit the former if the District so desires. In any event, so long as the conditions spelled out in Section 1 above are met, the District may discharge reclaimed water which matches the TDS quality of the San Diego Country Estates' water supply. The manner in which this average is computed is discussed, infra.

The record reflects that, over time, the water supply will approach but never equal the quality of the CWA water. The District projects that 1995 will find CWA supplying nearly 88 percent of its total water and, we assume, a somewhat lesser percentage of San Diego Country Estates' water. As that mixture

will continue to constitute the replacement source for the reclaimed water, the average TDS in the treated effluent may rise accordingly.

3. Contention: The District contends that the economic impacts of the order were not given proper consideration.

Finding: The District calculates that it would save about \$124,000 annually if the TDS level were raised from 200 mg/l to 550 mg/l. This represents energy savings both from reduced operation of the reverse osmosis facilities and from less frequent hauling of waste brine.

No calculations were submitted regarding the savings realized by raising the limit from 200 mg/l to blend average, but they are clearly substantial. The record indicates that the Regional Board has recognized the high costs associated with the treatment and disposal process in the adoption of Addendum No. 1. By relaxing the limits, the Regional Board has permitted the District considerable savings in operating costs.

4. Contention: The District further contends that it would be thoroughly impractical to attempt to meet the following provision of Addendum No. 1: "Compliance with this effluent limitation for any day shall be determined by effluent and potable water supply sampling on the same day."

Finding: We agree. Water delivered to San Diego Country Estates is pumped in a pipeline from a single pump station which serves the community of Ramona. The water passes through a six million gallon reservoir before distribution. The combination of pipeline and reservoir deters short-term fluctuations in quality.

We find no need for the daily compliance requirement. It should be adequate for the District to comply with a 12-month running average.

CONCLUSIONS

Based on the reasons set forth herein, we conclude that, while the District does not currently operate a viable reclamation project, it will be permitted six months to complete a status report setting forth its reclamation plans and timetables. If the report is adequate and progress is satisfactory, the District will be treated as if it had a reclamation project and the effluent standards contained in the Addendum will continue to apply.

We also conclude that the appropriate standard for effluent treatment is the quality of the water actually supplied to San Diego Country Estates. For 1980, that figure was about 427 mg/l TDS. This number may vary with the supply source and the District should be allowed to treat its effluent accordingly.

We further conclude that the Regional Board has adequately considered the economic consequences of its decision, as have we, and that the compliance requirements should be modified to require compliance with a 12-month running average.

ORDER

IT IS HEREBY ORDERED THAT:

1. The District submit a status report and the Regional Board furnish comments on the report to this Board within six months regarding reclamation projects in and around San Diego Country Estates.

2. The Regional Board amend Addendum No. 1 to Order No. 79-17 to require compliance with numerical concentration limitations computed on the basis of a 12-month running average.

3. All other contentions in the petition are dismissed.

DATED: December 17, 1981

/s/ Carla M. Bard

Carla M. Bard, Chairwoman

/s/ L. L. Mitchell

L. L. Mitchell, Vice-Chairman

/s/ Jill B. Dunlap

Jill B. Dunlap, Member

/s/ F. K. Aljibury

F. K. Aljibury, Member

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